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Martin G. Lynihan

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August 18, 2003

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of:

Barry C. Muffoletto et al.

Serial No.: 09/628,174

Group: 1775

Filed: May 1, 1997

Examiner: J. McNeil

For: METHOD FOR IMPROVING ELECTRICAL CONDUCTIVITY OF  
METALS, METAL ALLOYS AND METAL OXIDES

REPLY BRIEF

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Herewith is appellants' Reply Brief in triplicate in  
response to the Examiner's Answer mailed June 18, 2003.

On page 4 of the Answer the Examiner states:

It is the Examiner's position that the  
instant claims are commensurate with the  
types of claims of Thorpe.

To the contrary, the claims considered in In re Thorpe cited by the Examiner are significantly different from claims 6 and 7 of the instant application. The Thorpe application included process claims in the form of:

1. In the process of preparing a metal-modified novolac phenolic resin wherein. . . .

The claims on appeal in Thorpe were product-by-process claims of which the following claim is typical:

44. The product of the process of claim 1.

Claims 6 and 7 of the instant application are not in the form of the product-by-process claim 44 of Thorpe. Rather, applicants' claims 6 and 7 are hybrid type claims. Applicants' claims 6 and 7 are in the form of the claims considered by the CCPA in In re Luck, 177 USPQ 523 (CCPA, 1973) wherein the Court clearly held that process limitations are to be considered in a product claim to patentably distinguish the product over the prior art.

In arguing against application of In re Luck to the instant case, the Examiner states:

As noted in Luck, while the Board agreed that process limitations could result in a difference in the coated article, there was no criticality nor rebuttal evidence presented which distinguished the article over the prior art, even with patentable weight given to the process limitations.

In the first place, it is important to note that in Luck the process limitation under consideration involved applying a liquid organic solvent and two prior art references (Pipkin and

Crissey et al.) taught the use of an organic solvent thereby establishing a prima facie case of obviousness. That is not the situation here. Applicants' claims call for the substrate having the metal deposited on the substrate surface by low temperature arc vapor deposition. The prior art applied by the Examiner includes no suggestion of low temperature arc vapor deposition. The Evans reference applied by the Examiner teaches applying a solution containing ions of an electrically conducting material to the native oxide layer and then heating the substrate, oxide and applied ions to an elevated temperature for a time sufficient to incorporate the ions into the oxide layer. The substrate of applicants' invention advantageously does not require the heat treatment disclosed by Evans to incorporate ions into the oxide layer to increase the electrical conductivity thereof. Applicants, therefore, have established an unobvious difference between their claimed product and the Evans prior art product.


In the second place, the significance of the fact that the substrate of applicants' invention does not require the heat treatment disclosed by Evans should not be minimized. The substrate, oxide and applied ions of the Evans product have been heated at an elevated temperature for a time sufficient to incorporate the ions into the oxide layer. On the other hand, the product of applicants' invention has not been heated to such elevated temperature for such required time. It is reasonable to conclude that persons skilled in the art would consider that a product which has not been heated to such elevated temperature for such required time will be structurally different from one

that has been so heated for such time. Such structural difference coupled with the advantages of the absence of such heat treatment establishes an unobvious difference between applicants' claimed product and the product disclosed by Evans.

For the reasons set forth above and in appellants' Brief, the Board is respectfully requested to reverse the 35 USC 102 rejection of record and find that claims 6 and 7 define patentable subject matter over the art of record.

Respectfully submitted,

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